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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF:

Miroslav CHMELIR et al

SERIAL NO.: 09/554,090

FILED: June 14, 2000

:

: GROUP ART UNIT: 1713

: EXAMINER: Tatyana ZALUKAEVA

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TC 17301.A ROOM

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FOR: METHOD FOR PRODUCING WATER-SOLUBLE OR WATER-SWELLABLE  
POLYMERIZATES WITH A VERY LOW RESIDUAL MONOMER CONTENT,  
PRODUCTS PRODUCED ACCORDING TO THIS METHOD AND THE USE  
THEREOF

REPLY BRIEF

ASSISTANT COMMISSIONER FOR PATENTS  
WASHINGTON, D.C. 20231

SIR:

This is responsive to the Examiner's Answer mailed August 14, 2002.

On page 2 of the Examiner's Answer under Related Appeals and Interferences, the Examiner asserts that the brief does not contain a statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal. However, in the Supplemental Appeal Brief filed May 22, 2002 it was stated under the heading Related Appeals and Interferences that the statement under Related Appeals and Interferences in the Appeal Brief filed December 13, 2001 was incorporated by reference and affirmatively stated to the best of Appellants' undersigned representatives' knowledge, there are no related appeals or interferences. Therefore, it is submitted that an explicit statement as to the existence of any related appeals and interferences was, therefore, made in the Brief submitted on May 22, 2002.

## RESPONSE TO EXAMINER'S ARGUMENTS

On page 6 of the Examiner's Answer the Examiner states that the column and line citations in Anderson by Appellants supporting the fact that Anderson teaches away from a subsequent heating step were not persuasive and cited Column 4, lines 22-27 of Anderson. The Examiner stated that this citation does not at all eliminate drying, but provides drying by the heat generated during the reaction. Therefore, according to the Examiner, the drying does exist, although not provided by external source, but by an internal source. The Examiner further stated that the limitation "subsequently" does not eliminate the possibility of drying with the heat energy generated during the reaction. However, since Claim 24 positively recites the formation of the polymer or copolymer and positively recites subsequently heating of the polymer or copolymer at a temperature of from 120 to 240°C, it is clear that the exothermal heat generated by the reaction of the present invention, which is a reaction using materials identical to or very close to the materials of Anderson, will have already been dissipated during polymerization in order to provide a drying function and must be considered totally separate from a subsequent heating step that takes place after the polymerization step. This is clearly indicated by the language in column 2 of Anderson "...by aqueous solution polymerization without any additional dehydrating or drying step"; Column 3 "During synthesis, the resin dries to an acceptable water content of at least less than 15%..."; Column 4 "...subjected to polymerization in the presence of one or more polymerization initiators without external heating while allowing water to evaporate."; Column 4 "In accordance with the present invention, improved crosslinked water-absorbant resins are prepared by aqueous solution polymerization while dehydrating or drying the reaction product during polymerization by utilizing the exothermic heat from the copolymerization and crosslinking reactions for drying" and Column 6, "...the heat of the polymerization and crosslinking

reactions will evaporate water rapidly from the reaction system...without the need for any subsequent drying step". All of the above citations from Anderson clearly indicate that no subsequent heating step is contemplated by the reference.

On page 7 of the Examiner's Answer the Examiner states that the Chmelir reference is not used to apply to the order of neutralization and polymerization but to show how the most conventional step in the art of polymer chemistry, namely the step of drying by heating of Chmelir can be applied to Anderson's process. However, since, as argued on page 3 of the Brief, the references are not combinable, because the processes are completely different and Anderson et al. teach away from using a separate drying step at all, the worker of ordinary skill in the art would not be directed to supply the drying step of Chmelir to the process of Anderson.

On pages 8 and 9 of the Examiner's Answer the Examiner argues that the motivation to dry polymers is expressed in Anderson and that preferred embodiments do not constitute a teaching away from a broader disclosure for non-preferred embodiments. However, there is no disclosure in Anderson of any non-preferred embodiments and only a disclosure of using the heat of polymerization to simultaneously dry the polymer as it is formed. There is no disclosure or teaching in Anderson to perform a heating step subsequent to the formation of the polymer or copolymer formed in a polymerization step. Therefore, Anderson clearly teaches away from a separate or subsequent heating step as in the present claims.

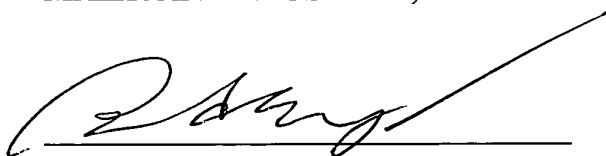
Finally, the Examiner argues on page 9 of the Examiner's Answer that the motivation to combine references comes from three sources: the nature of the problem to be solved (in the instant case the process directed to obtaining polymers with low residual monomer content), the teaching of the prior art (motivation provided by Anderson) and the knowledge of persons of ordinary skill in the art. However, it is the position of Appellants that there is

no motivation to combine Anderson with Chmelir, because they are directed to different processes for obtaining polymers with low residual monomer content and because the worker of ordinary skill in the art would not be motivated to substitute the drying step of Chmelir into the process of Anderson, because it is clearly taught by Anderson that there is no need to do so, since Anderson dries the polymer product by the exothermic heat of reaction generated in the polymerization process itself.

In view of the preceding arguments, Appellants respectfully request that the Examiner's rejection of Claims 13-16 and 18-31 be reversed.

Respectfully submitted,

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